June 3, 2002

Chris Chadwick
C&B Custom Modular
2224 Bloomingdale
Bistol, Indiana 46507

Dear Mr. Chadwick:

Re: Exempt Construction and Operation Status,
039-15482-00569

The application from C&B Custom Modular, received on April 5, 2002, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the following boiler and paint booth, located at 2224 Bloomingdale, Bistol, Indiana, 46507, are classified as exempt from air pollution permit requirements:

(a) One (1) natural gas space heater with a maximum capacity of one (1) million Btu per hour, identified as b-650, installed March 2002, and

(b) One (1) paint booth for miscellaneous metal coating, identified as E1, with a maximum capacity of 1.5 building modular units per hour, using dry filters for over spray control and exhausting to one (1) stack, identified as V1.

The following conditions shall be applicable:

1. Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following:

   (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

   (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuos opacity monitor in a six (6) hour period.

2. Pursuant to 326 IAC 6-3-2 (Process Operations), the PM from the paint booth for miscellaneous metal coating (E1) shall not exceed the pound per hour emission rate established as E in the following formula:

   Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

   $E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
   P = process weight rate in tons per hour

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for an Exempted Source

Source Background and Description

Source Name:	C&B Custom Modular
Source Location:	2224 Bloomingdale, Bistol, Indiana 46507
County:	Elkhart
SIC Code:	1541
Operation Permit No.:	039-15482-00569
Permit Reviewer:	ERG/EH

The Office of Air Quality (OAQ) has reviewed an application from C&B Custom Modular, relating to the construction and operation of a paint booth and the operation of an existing boiler.

Emission Units and Pollution Control Equipment

The source consists of the following facilities/units:

(a) One (1) natural gas space heater with a maximum capacity of one (1) million Btu per hour, identified as b-650, and installed March 2002. [This emission unit is considered exempt from permitting.]

New Emission Units and Pollution Control Equipment Receiving Prior Approval

(b) One (1) paint booth for miscellaneous metal coating, identified as E1, with a maximum capacity of 1.5 building modular units per hour, using dry filters for over spray control and exhausting to one (1) stack, identified as V1.

Existing Approvals

There are no existing permits - this approval represents the facility's first approval.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on April 5, 2002.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (pages 1 through 4).

Potential To Emit Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	0.033
PM-10	0.033
SO_2	0.003
VOC	2.4
CO	0.368
NO_x	0.438

HAP's	Potential To Emit (tons/year)
Xylene	0.06
Ethylbenzene	0.01
TOTAL	0.07

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of VOC or NOx is less than ten (10) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of criteria pollutants is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-6.1.

(c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of pollutants is less than the levels listed in 326 IAC 2-1.1-3(d)(1), therefore, the source is subject to the provisions of 326 IAC 2-1.1-3.

(d) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

(e) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

County Attainment Status

The source is located in Elkhart County.

Pollutant	Status
PM-10	Attainment
SO_2	Attainment

Pollutant	Status
NO_2	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

(a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Elkhart County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Elkhart County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than 100 tons per year,

(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and

(c) any combination of HAPs is less than 25 tons/year.

This is the first air approval issued to this source.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is located in Elkhart County and the potential to emit all criteria pollutants is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 6-3-2 (Process Operations)

The PM from the paint booth for miscellaneous metal coating (E1) shall not exceed the pound per hour emission rate established as E in the following formula:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

The dry filters shall be in operation at all times the paint booth is in operation, in order to comply with this limit.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The operation of the paint booth will emit less than ten (10) tons per year of a single HAP or twenty-five (25) tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 8-1-6 (New Facilities - General Reduction Requirement)

This source does not have potential VOC emissions equal to or greater than twenty five (25) tons per year, therefore this source is not subject to the provisions of 326 IAC 8-1-6.

326 IAC 8-2-9 (Miscellaneous metal coating operations)

Pursuant to 326 IAC 8-2-1 (Surface Coating Emission Limitations), facilities which construct after July 1, 1990 and have actual emissions less than fifteen (15) pounds per day of VOC are not subject to 326 IAC 8-2. The actual VOC emissions for this new construction is less than fifteen (15) pounds per day and as a result 326 IAC 8-2-9 does not apply.

Conclusion

The construction of the paint booth and the operation of the boiler shall be subject to the conditions of the attached proposed Exemption 0039-15482-00569.

3. The total actual and potential to emit of VOC from the paint booth (E1) is less than fifteen (15) pounds per day and ten (10) tons per year. Therefore, the requirements of 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) and 326 2-5.5 (Registrations) are not applicable.

   Any change or modification which may increase the actual VOC emissions to above fifteen (15) pounds per day or the potential to emit of VOC to above ten (10) tons per year per twelve (12) consecutive month period must be approved by the Office of Air Quality before any such change may occur.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Original Signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

ERG/EH

cc: File - Elkhart County
Elkhart County Health Department
Air Compliance - Paul Karkiewicz
Permit Tracking - Sara Cloe
Technical Support and Modeling - Michele Boner
Compliance Branch - Karen Nowak

Appendix A: Emission Calculations
Natural Gas Combustion Only
MMBTU/HR<100
Small Industrial Boiler

Company Name: C&B Custom Modular
Address City IN Zip: 2224 Bloomingdale, Bristol, IN 46507
CP: 039-15482
Plt ID: 039-00569
Reviewer: ERG/EH
Date: 04/15/2002

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
1.0	8.8

Pollutant

	PM*	PM10*	SO2	NO_x	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.033	0.033	0.003	0.438	0.024	0.368

*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.
**Emission Factors for NO_x: Uncontrolled = 100, Low NO_x Burner = 50, Low NO_x Burners/Flue gas recirculation = 32

Methodology

All Emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF - 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (AP-42 Supplement D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emission Calculations
Natural Gas Combustion Only
MMBTU/HR<100
Small Industrial Boiler

Company Name: C&B Custom Modular
Address City IN Zip: 2224 Bloomingdale, Bristol, IN 46507
CP: 039-15482
Plt ID: 039-00569
Reviewer: ERG/EH
Date: 04/15/2002

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMCF	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	9.198E-06	5.256E-06	3.285E-04	7.884E-03	1.489E-05

HAPs - Metals

	Lead	Cadmuim	Chromium	Manganese	Nickel
Emission Factor in lb/MMCF	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	2.190E-06	4.818E-06	6.132E-06	1.664E-06	9.198E-06

Methodology is the same as previous page.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations

Company Name: C&B Custom Modular
Address City IN Zip: 2224 Bloomingdale, Bristol, IN 46507
CP: 039-15482
Plt ID: 039-00569
Reviewer: ERG/EH
Date: 04/15/2002

Material	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
M-22	9.1	59.10%	0.0%	59.1%	0.0%	40.90%	0.06800	1.500	5.38	5.38	0.55	13.17	2.40	0.58	13.15	65%

State Potential Emissions **Add worst case coating to all solvents** **0.55** **13.17** **2.40** **0.58**

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

Appendix A: Emission Calculations
HAP Emission Calculations

Company Name: C&B Custom Modular
Address City IN Zip: 2224 Bloomingdale, Bristol, IN 46507
CP#: 039-15482
Plt ID: 039-00569
Permit Reviewer: ERG/EH
Date: 04/15/2002

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Xylene	Weight % Toluene	Weight % Ethlybenzene	Weight % Benzene	Weight % Hexane	Weight % Glycol Ethers	Weight % Methanol	Xylene Emissions (ton/yr)	Ethylbenzene Emissions (ton/yr)
M-22	9.1	0.068000	1.50	1.40%	0.00%	0.20%	0.00%	0.00%	0.00%	0.00%	0.06	0.01
Total State Potential Emissions											**0.06**	**0.01**

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

Hapcalc.wk4 9/95

POTENTIAL TO EMIT SUMMARY

	PM/PM-10	SO_2	NOx	CO	VOC	Xylene	Ethlybenzene
Boiler	0.033	0.003	0.438	0.368	0.024	-	-
Paint Booth					2.4	0.06	0.01
Total	**0.033**	**0.003**	**0.438**	**0.368**	**2.4**	**0.06**	**0.01**